

Borough of Brighton.

ANNUAL REPORT
ON THE
HEALTH,
SANITARY CONDITION, &c.,
OF THE
BOROUGH OF BRIGHTON,
FOR THE YEAR 1895.

BY
ARTHUR NEWSHOLME, M.D.,
Medical Officer of Health.

BRIGHTON :
KING, THORNE & STACE, PRINTERS, 4 & 5 JUBILEE STREET.
1896.

BOROUGH OF BRIGHTON.

Sanitary Committee.

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Medical Officer of Health.

ARTHUR NEWSHOLME, M.D. Lond.

TOWN HALL,

June 20th, 1896.

To the Sanitary Committee of the Brighton Town Council.

GENTLEMEN,—

I beg to present herewith my annual report for the year 1895. It gives full particulars of the vital statistics, the sanitary work, and the administration of the Sanatorium during the past year.

From unavoidable causes, the issue of this report has been greatly delayed. This has enabled me to present certain figures in fuller detail than usual, and thus, I believe, to enhance the permanent value of the report as a record of work accomplished, and of directions in which further progress is possible. The table of contents, on page 4, will enable easy reference to be made to the different subjects discussed.

I am, Gentlemen,

Your obedient Servant,

ARTHUR NEWSHOLME,

Medical Officer of Health.

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A.—VITAL STATISTICS.

POPULATION.

The population of Brighton at the middle of 1895 is estimated by the Registrar-General to be 119,606. This estimate is based on the assumption that the rate of increase during the decennium 1881-90, is being continued in the present decennium. It will be remembered that a corresponding assumption for the last decennium made our estimated population in 1891 to be 125,539, instead of 115,606, the actual number. It is not unlikely, however, in view of the following considerations, that our population is now being under-estimated:—

(a) A return which the Borough Surveyor has supplied, shews that 362 new houses were passed by his department in 1895, as compared with 207 in 1894. Of these 362 houses, 332 were new dwelling-houses, situate in the following wards:—Preston 140, Preston Park 48, St. John's 43, Lewes Road 35, Queen's Park 31, Pier 30, Kemp Town 4, Hanover 1. If we assume that there are 5·93 persons per house in these new houses (the average number per house at the last census), the estimated population of 1894 is increased by 2,147, and becomes 120,862 in 1895. It is assumed in this calculation that the houses occupied before 1895 are still occupied by an average of 5·93 persons per house.

(b) During the four years that have elapsed since the census of 1891, there have been 8,590 deaths and 12,051 births; giving a *natural increase*, by excess of births over deaths, of 3,461. Adding this to the population at the middle of 1891, we obtain 119,067 instead of 119,604 by the Registrar-General's method. This allows nothing for the possible excess of immigration over emigration. The natural increase in the ten years, 1882-91, was 9,862, which added to the population of 1881 would have made the population 117,996 in 1891, instead of 115,602, the actual number as derived from the census. Similarly the natural increase in 1872-81, added to the population of 1881, gives 98,909 as the population of 1881 instead of 99,209, the actual number as derived from the census for the Parish of Brighton. It appears therefore that while in one decade, 1871-80, the population of Brighton increased by an amount slightly greater than its natural increase, in the next decade, 1881-90, it increased by an amount considerably less than its natural increase. No safe conclusions can consequently be drawn by this method.

(c) A further check on the population as estimated by the Registrar-General would be furnished by a return of the inhabited houses obtained from the rate-books, and this I hope to obtain for my next report (see Table IV.).

Population of Sub-Districts.—The populations given in Table III. have been obtained as follows. The population of the Palace sub-district decreased from 21,165 in 1881 to 20,149 in 1891, that of the Kemp Town sub-district from 15,489 in 1881 to 15,119 in 1891. It does not appear likely that this decrease is continuing at the same rate in the present decennium, especially in Kemp

Town, and I have assumed that the populations of these two sub-districts have remained stationary since the last census. The populations of St. Peter's and Preston sub-districts have then been estimated by the Registrar-General's method, and (no allowance having been made for decrease in Palace and Kemp Town) the excess over the estimated population for the whole Borough thus obtained, which was 1,236 in 1895, has been deducted from the estimated populations for St. Peter's and Preston in the proportion of these two populations.

Population of Wards.—The figures given in Table IV. have been obtained as follows:—The estimated population for each ward was obtained for 1894 by ascertaining from a careful examination of the rate books the number of houses inhabited or partially inhabited, and allowing 5·93 persons per house, the number at the last census. Then the number of new houses built during 1895 in each ward being known, it has been assumed that they are occupied by 5 persons each, instead of 5·93 as at the last census. The total population thus obtained is 119,959, instead of 119,604 according to the Registrar-General. This statement of the population of each ward will be checked during 1896 by obtaining a new enumeration of inhabited houses from the rate books.

BIRTHS.

The total number of births registered in the Municipal Borough in the 52 weeks ending December 28th, 1895, was 3,057,—1,572 of boys and 1,485 of girls. This is equivalent to a birth-rate of 25·6 per 1,000 inhabitants. The birth-rate of England and Wales was 30·3 per 1,000, that of London being 30·5. Brighton had the lowest birth-rate among the great towns, with the exception of Croydon (25·2), Huddersfield (21·6) and Halifax (23·4). For a comparison of the birth-rate with that of previous years see Table I., page 30.

Of the births, 204 were of illegitimate children, forming 6·7 per cent. of the total births, as compared with 8·5 per cent. in the previous year. 69 births occurred in the Workhouse, of which 58 were of illegitimate children.

DEATHS.

During the year 1895, 2,250 deaths were registered as belonging to Brighton, 1,059 of males and 1,191 of females. This shows an annual death-rate of 18·8 per 1,000 inhabitants, as compared with 16·4 in 1894 and 21·8 in 1882 (see Table II., page 24).

The death-rate was 28·7 in the first quarter of the year, 16·5 in the second quarter, 16·0 in the third quarter, and 14·2 in the fourth quarter of the year.

The comparatively high death-rate during 1895 was caused chiefly by the exceptional climatic conditions of the year (see pages 19 and 22) and by the epidemic of influenza in the first quarter of the year (see page 15).

The birth and death-rates in the several sub-districts are given in Table III., page 24.

The birth-rate varied from 26·2 in St. Peter's to 15·3 in the Palace sub-district, and the death-rate from 20·6 in St. Peter's to 12·9 in the Preston sub-district. The lowest death-rate from zymotic diseases was in the Palace sub-district.

The number of acres in the Palace sub-district is 249, in the Kemp Town sub-district 191, in St. Peter's 1,185, and in Preston 904, not including 91 acres of foreshore. These give a density of population in 1895 in the respective sub-districts of 80, 79, 58 and 17 persons per acre.

DEATHS DISTRIBUTED ACCORDING TO WARDS.

In Table IV., page 25, an attempt has been made to calculate the density of population and the death-rate for each of the 14 wards of the Borough. The estimates of population have been obtained as described on page 6. They may be regarded as approximately correct. In drawing conclusions from this Table, it must be remembered that these wards have populations with a very varying proportion of young children and of aged persons. As the death-rate is at its maximum at the two extremes of age, some allowance must be made for this fact. As a rule, the wards in Table IV. shewing the lowest death-rate have the smallest proportion of infants. Allowance for this factor would probably not in any case raise the stated death-rate by 2 per 1000; and after making such due allowance, the contrast between a death-rate of 11 (*i.e.* 9+2) for Preston Park and 12·6 (*i.e.* 10·6+2·0) for Kemp Town, with 25·7 in the Hanover and 23·3 per 1000 in the Lewes Road Wards, is very striking. The causes of the very high mortality last year were influenza and respiratory ailments during the phenomenally severe first quarter of the year, and diarrhoea during the exceptionally hot weather in September and October (see pages 14, 15 and 19-23).

I have extracted for each ward the number of deaths from the chief causes of death.

The results are shewn in Table IV., page 25. The death-rate from the seven chief zymotic diseases and from tubercular diseases was highest in the Hanover Ward, the rate from zymotic diseases in this ward being nine times as great as in the West Ward, and from tubercular diseases $3\frac{1}{2}$ times as great as in the Preston Park Ward.

The death-rate from bronchitis and pneumonia was highest in St. John's and next highest in Queen's Park Ward (omitting deaths in the Workhouse Infirmary). In the Pier and St. Nicholas Wards the true results are concealed by the fact that the populations consist partly of rich and partly of poor.

DEATH OF VISITORS.

Of the total 2,290 deaths registered in Brighton during last year, 107 were stated to be of visitors. The return of deaths among visitors is incomplete, many of the deaths occurring amongst visitors not being marked as such. The County Hospital in particular draws a considerable number of patients from

surrounding districts, as will be seen from the following table of deaths in that institution :—

	1891.	1892.	1893.	1894.	1895.
Deaths of Inhabitants of Brighton ...	95	75	94	94	92
Deaths of persons from the rural districts of Sussex, &c. ...	18	23	19	21	24
Deaths of persons from Hove... ..	10	4	6	12	11
Deaths of persons from London, &c. ...	3	2	2	2	3
Addresses not known	—	—	—	4	1
	<hr/> 126 <hr/>	<hr/> 104 <hr/>	<hr/> 121 <hr/>	<hr/> 133 <hr/>	<hr/> 131 <hr/>

Thus, taking the average of five years, 27 per cent. of the total deaths in the County Hospital were of non-residents.

Of the 23 deaths in the Children's Hospital during 1895, four were of patients from Hove, one from Maresfield, one from Shoreham, one from Portslade, and one from London.

The Registrar-General now excludes from the Brighton returns the deaths occurring in the Female Convalescent Home, Marine Parade, in the Sussex County Hospital, and in the Borough Sanatorium respectively, of persons who had not resided in the Borough prior to their admission into the respective institutions; and includes on the other hand the deaths of any Preston paupers which occur in the Steyning Union Workhouse. As shewn by the above table, 39 deaths of outsiders occurred at the County Hospital. One death occurred in the Convalescent Home, Marine Parade. The result of the correction carried to this extent is to reduce the total 2,290 deaths by 40. No correction is made for the Children's Hospital and other institutions in the town; and no account is taken of the much larger number of visitors who die in Brighton, but not in any public institution in it.

DEATHS IN PUBLIC INSTITUTIONS.

Of the total deaths, 236 occurred in the Workhouse, 131 in the County Hospital, 23 in the Children's Hospital, 14 in the Sanatorium, 2 in the Throat and Ear Hospital, 4 in the Lying-in Hospital, 4 in St. Mary's Home, and 8 in the Barracks.

DEATHS DISTRIBUTED ACCORDING TO AGE.

We have seen that the death-rate varied in the several sub-districts from 20·6 in the St. Peter's to 12·9 per 1,000 in the Preston sub-district. A portion of this may be owing to the excess of persons at ages at which a high rate of mortality is inevitable; and for this, among other reasons, Table V., page 25, has been calculated, giving the exact death-rate at the various groups of ages in terms of the number living at the corresponding ages. This table shews that among children under 5 years of age the deaths were 75 per 1,000 living in St. Peter's,

as compared with 33 per 1,000 living in Preston. The death-rate was highest in the St. Peter's sub-district at all age groups except 5—10 and 65 and upwards.

Infantile Mortality.—The infantile mortality (under one year of age) is best stated in terms of the infantile population, that is, practically the annual number of births. Thus stated, during last year it was 164 per 1,000 births, being highest in the Palace and St. Peter's sub-districts (see Table VI., page 25).

Mortality among Illegitimate Infants.—The total number of deaths under one year of age in 1895 was 503. Of this number 73 were illegitimate children. Stated in proportion to numbers living, the relative mortality among legitimate and illegitimate infants was as follows :—

	1891.	1892.	1893.	1894.	1895.
Deaths of legitimate infants per 1,000					
legitimate births	118	134	158	135	151
Deaths of illegitimate infants per 1,000					
illegitimate births	293	360	319	173	358

CHIEF CAUSES OF DEATH.

The chief causes of death, and the number of deaths from each disease or group of diseases, are tabulated in Table VII. This table not only gives the relative incidence of different diseases, but also enables us to see the incidence of each disease in the two sexes and at different ages.

ZYMOTIC DISEASES.

The seven chief infectious diseases caused 206 deaths as compared with 143 in the previous year, which is equivalent to an annual death-rate of 1·72 per 1,000 of population.

The relative proportion borne by each zymotic disease is shewn in Table VIII., page 28.

It is satisfactory to note the continued absence of small-pox from this table, the very low death-rate from scarlet fever, the decided reduction of diphtheria and of measles. We have on the other side a slight increase of typhoid fever, and a decided increase of whooping-cough and of diarrhœa.

THE NOTIFICATION OF INFECTIOUS DISEASES.

For a knowledge of the more important Infectious Diseases we are, since March 1st, 1891, no longer dependent solely on the uncertain and late information obtainable from the death-returns and from casual sources.

The more accurate and prompt returns furnished to me under the Infectious Diseases Notification Act show that the total number of *cases* of Infectious Diseases notified during 1895 was 571 :—Diphtheria, 204 ; Scarlet Fever, 195 ; Enteric Fever, 87 ; Erysipelas, 69 ; Puerperal Fever, 8 ; Membranous Croup, 1 ; Small Pox, 6 ; and Gastric Fever, 1.

The above is the number of supposed *cases* of infectious disease. Further observation in a certain proportion of these led to a revision of the diagnosis.

Eighteen cases of Diphtheria, 26 of Enteric Fever, and 4 of Erysipelas were notified severally by two doctors, chiefly in connection with their removal to hospitals.

The total number of notifications (including 7 notified by myself, 15 by the Medical Officer attached to the Preston Barracks, and 1 by a householder alone) was 619 as compared with 588 in 1894. Of these, 189 occurred in public medical practice—the amount payable for the certificates being £9 9s. ; while 407 occurred in private medical practice—the amount payable being £50 17s. 6d. The total amount paid for notification certificates was £60 6s. 6d., as compared with £59 9s. 6d. in 1894, and £101 19s. in 1893.

SMALL-POX.

During the year, six notifications of small-pox were received. One was subsequently found to be chicken-pox.

The five remaining cases represented two importations of the disease, both successfully coped with.

The first was a man who developed small pox directly after his arrival at Brighton in February from Aston, near Birmingham, where he had been engaged with a theatrical company. No cases secondary to this occurred. All the persons who had been exposed to infection were immediately re-vaccinated. I at once communicated with the Medical Officer of Health for Aston Manor. This led to the discovery of an unnotified case of small-pox at the address indicated by me, and the successful prosecution of the person in default.

The next group of four cases originated in the following manner :—A charwoman started with small-pox on February 20th. The only clue discoverable was that she was employed in mending the carpets in the rooms occupied by a gentlemen who a short time previously had come to Brighton after being discharged from a metropolitan small-pox hospital. That this was the true clue was in a few days rendered more certain by the notification of a case of small-pox in the person of another charwoman living in a different part of Brighton from the first charwoman. The onset of this second case was on February 25th, and making due allowance for the period of incubation, she could not have acquired the disease from the first charwoman. Both women had been employed at the house above indicated. The gentleman indicated had on his arrival a certificate of freedom from infection, and on communication with the Medical Officer of the small-pox hospital in which he had been lodged, I was assured that every precaution had been taken. It is remarkable that a few days after his arrival in Brighton this gentleman had a few spots on his forehead, which the doctor who was called in did not think serious. Whether this was a second attack of the disease or whether some articles belonging to him had

escaped disinfection I am unable to say. Such secondary attacks are unknown in small-pox, though common in typhoid fever and occasional in scarlet fever (see page 47 of this report). There is an alternative supposition that the disease for which the gentleman was admitted to the Metropolitan hospital was not small-pox though simulating it ; and that the "few spots on the forehead" which he had after arriving in Brighton represented a modified attack caught in the hospital. This view is not favoured by the Medical Officer of the hospital. The case of the second charwoman was unfortunately not notified until the fourth day, and in the meantime she had been visited by neighbours from the opposite side of the street. These refused to be re-vaccinated. They were therefore visited daily, and on the 12th March I was able to state that both were suffering from small-pox, and they were at once removed to the Sanatorium. No further cases followed. All the above cases, occurring in persons who had been vaccinated in infancy, were mild in character.

No other cases of small-pox have occurred during the year, and the above record is extremely satisfactory, in view of the frequent possibilities of importation to which we are subject. Our continued immunity depends on two conditions : (a) The prompt notification of all doubtful cases by medical practitioners, and (b) the condition of the population of Brighton as regards vaccination. On the first point, I wish to acknowledge the readiness and promptitude with which doctors have asked me to see a number of cases which subsequently were found not to be small-pox. In such a matter it is obviously very necessary to commence isolation before the diagnosis can be free from uncertainty.

The information supplied by Mr. Clifford, the Vaccination Officer for the Parish of Brighton (Table X., page 29), furnishes the necessary data on the second point. 4.9 per cent. of the children born were not accounted for by death or medical certificate, and probably escaped vaccination, as compared with 5.3 per cent. in the two preceding years. Although a much smaller proportion escape primary vaccination than in many other towns, the table is not satisfactory. The proportion of vaccination performed by public vaccinators has steadily declined in recent years. In so far as this indicates that imperfect vaccination, probably by only one puncture, has replaced the more efficient vaccination performed by the public vaccinators, it is very regrettable. The imperfect vaccination referred to is performed by two or three doctors who advertise facilities for this purpose, and thus compete with the public vaccinators among the poor, whom it is specially important to protect by efficient primary vaccination.

ENTERIC OR TYPHOID FEVER.

During 1895, 87 cases were notified to me as typhoid fever. Of these 12 were subsequently ascertained not to be typhoid fever, and in 19 other cases it was discovered that the disease had been acquired before the patient arrived in Brighton. This leaves 56 cases to be accounted for, which apparently originated in Brighton. In my last annual report, I made the statement that "at least 40 per

cent. of the cases of enteric fever originating in Brighton during 1894, were ascribable to sewage-contaminated shell-fish." The cases of typhoid fever occurring in 1895 were similarly investigated, with the result that in 35 cases it appeared that no shell-fish had been taken prior to the attack of fever, in 2 there was doubt on this point, in 7 the attack was directly ascribable to oysters, and in 12 to other shell-fish eaten raw. Thus during 1895, 30·4 per cent. of the total cases originating in Brighton were attributable to shell-fish.

The evidence connecting these 19 cases with the consumption of raw sewage-contaminated shell-fish did not consist simply in the fact that shell-fish had been consumed within three weeks before the date of onset of the disease. Such an order of events, occurring in a rapid succession of cases, would have served to justify a serious suspicion that the shell-fish were connected with the typhoid fever in the relationship of cause and effect rather than accidentally. The facts when investigated in detail were much more conclusive, comprising as they did the significant circumstances that in the majority of cases, either (*a*) the one person taking the shell-fish was the one person acquiring typhoid fever, or (*b*) when other persons in the same house had eaten shell-fish they had diarrhœa or other evidence of illness, although this did not develop into actual typhoid fever. When we add to this, that sewage-derived organisms were found in the interior of oysters derived from the same beds or ponds, the evidence becomes as strong as it can in the nature of things be in a medical inquiry concerned with circumstances of life necessarily complex in character. During the present year (May, 1896), the Corporation have unsuccessfully attempted to obtain power by a private Act to prevent the importation of sewage-contaminated shell-fish into the Borough. The failure to obtain these powers is regrettable, for although the Local Government Board has been for some time engaged in investigating the question, there is no guarantee that any efficient legislation on the subject will be enacted within a reasonable time. Meanwhile, the danger to the public arising from the taking of raw mussels and oysters, when there is no guarantee that they have not been derived from a sewage-contaminated source, remains.

SCARLET FEVER.

During 1895, 195 cases of scarlet fever were notified. A reference to Table IX., page 29, will shew that this was lower in proportion to population than in the three previous years. The total number of deaths from scarlet fever during 1895 was 5, as compared with 24 from measles and 41 from whooping cough, over which there is very scant official control. Part of this reduction is caused by the milder type of scarlet fever now prevalent; but one cause of the milder type is the removal of the majority of the cases from their homes to the Sanatorium. More striking evidence of the utility of the Sanatorium it would be difficult to adduce.

The exact extent to which the Sanatorium is used for scarlet fever patients can now be gauged for several years.

Year.	Admissions to Sanatorium per cent. of total cases notified.	Case-Mortality, per 100 cases.	
		Among Patients treated at Home.	Among Patients treated in the Sanatorium.
1891 (from Mar. 1st.	70.0	—	—
1892	71.7	1.0	2.5
1893	70.6	2.5	1.6
1894	82.2	2.6	1.3
1895	77.4	2.3	2.6

This Table shews that the majority of cases of scarlet fever are treated at the Sanatorium, thus giving a guarantee to both visitors and residents that the chances of infection in the town are reduced to a minimum.

Result of Home Treatment and Hospital Treatment.—The above table also shews the comparative case mortality of patients treated at home or at the Sanatorium for a series of years. In view of the fact that there is less difficulty in obtaining the consent of parents to the removal of severe than of slight cases, the benefits of hospital treatment come out very strikingly.

DIPHTHERIA.

During 1895, 204 cases of diphtheria were notified, of which 19 were fatal. A reference to table IX., page 29, will shew that the death-rate from this disease had declined from 29 per 100,000 in 1893 to 15 per 100,000 of population in 1895; while the deaths per 100 cases had declined from 18.4 to 8.8. This lower case-mortality may be owing to the disease now prevalent being of a milder type, or to the fact that slight cases of diphtheria are oftener recognized and notified by medical practitioners than in previous years. Probably both factors are at work. It is unnecessary to enter into the means by which diphtheria is spread, as this was discussed in my last annual report. Allusion may be made, however, to a series of cases in the first quarter of the year, in which the infection appeared to be acquired from cats. The following warning was published in my report for the first quarter of 1895 :—

As to Prevalent Illness Among Cats.—My attention has been called to the fact that, especially in the neighbourhood between Elm Grove and Southover Street, there has been a large amount of illness among cats. A considerable number have been found lying dead; and I have had the opportunity of examining others which suffered from one or more of the following symptoms: difficulty in swallowing, discharge from the nose, nasty cough and retching. The cats in question were thin and looked ill, and their owners suspected that they had been poisoned. There is little doubt, however, that they were suffering from

an infectious illness, and I have the strongest reason for believing that a number of children have acquired diphtheria from such cats.

Under these circumstances I must warn householders of the danger of keeping a cat which is suffering from any of the above symptoms. It would appear unnecessary to state that a dead unburied cat may still be a source of infection ; but in view of recent events I am obliged to add this warning.

MEASLES AND WHOOPING COUGH.

A reference to Table VIII., page 28, shews that measles was somewhat less prevalent and whooping cough more prevalent than in 1894. These diseases are not notifiable, and we are dependent for our information concerning them on returns kindly made weekly or oftener by the teachers of public elementary schools. Suspicious absentees are visited at their homes, precautionary circulars are distributed, and children from infected households are prevented from attending school. The attempts thus made can only be completely successful when the co-operation of parents has been secured, and it has been realised that these diseases are, in the aggregate, much more fatal than the so-called more serious infectious diseases.

DIARRHŒA.

The number of deaths from this cause was 2 in the first quarter of the year, 5 in the second quarter, 74 in the third quarter and 21 in the fourth quarter. This was higher than in any year since 1887.

The causes of this excessive mortality were fully discussed in the third and fourth quarterly reports for 1895. Assuming the same amount of carelessness as to the proper feeding of infants and the same amount of uncleanness, the amount of diarrhœa varies with certain climatic conditions. The maintenance of a soil-temperature of more than 56 degrees is one of the conditions usually found when diarrhœa is excessive. The accompanying table shews that this prevailed from early in July until the end of October, an unusually long period, and that after the first month its evil effects became manifest in a greatly increased weekly number of deaths.

Week ending	Temperature.						Deaths from diarrhoea during week.
	Air.		Earth.				
	Max.	Min.	Max.	Min.	Rain.	Days on which rain fell.	
July 6 ...	70·4	53·6	58·4	58·0	·12	2	—
„ 13 ...	71·0	47·8	59·0	58·6	·08	1	1
„ 20 ...	72·4	52·2	59·8	59·2	·71	3	2
„ 27 ...	69·6	51·6	60·0	59·8	1·46	6	2
Aug. 3 ...	68·0	51·0	60·0	60·0	·26	6	4
„ 10 ...	68·2	49·2	60·0	60·0	1·19	7	10
„ 17 ...	70·8	53·2	60·8	60·0	·13	2	4
„ 24 ...	75·0	53·2	61·8	60·6	·03	1	6
„ 31 ...	69·8	49·2	62·0	61·0	·31	3	9
Sept. 7 ...	76·4	47·6	61·4	61·0	·55	2	9
„ 14 ...	78·0	61·2	62·0	61·6	·30	1	8
„ 21 ...	69·8	47·4	61·4	60·4	—	—	9
„ 28 ...	83·2	49·2	60·2	60·0	·22	1	10
Oct. 5 ...	79·0	39·2	60·8	60·2	1·08	5	8
„ 12 ...	63·0	39·6	60·0	59·0	1·58	4	7
„ 19 ...	63·4	38·4	58·8	57·0	·07	1	1
„ 26 ...	56·8	30·6	56·8	54·8	·37	3	1
Nov. 2 ...	55·0	30·6	54·2	51·4	1·58	4	1
„ 9 ...	59·0	38·8	51·8	51·0	1·59	7	—
„ 16 ...	61·8	40·2	52·4	52·0	1·64	7	—
„ 23 ...	57·0	35·8	52·2	51·8	·28	5	1
„ 30 ...	52·8	35·0	51·8	50·2	·85	4	—
Dec. 7 ...	53·4	35·4	50·2	49·8	·21	5	—
„ 14 ...	51·2	30·0	49·6	48·2	·81	5	—
„ 21 ...	49·8	33·8	48·0	47·0	1·09	3	1
„ 28 ...	49·0	31·8	47·0	45·8	·81	5	1

INFLUENZA.

Influenza is not included among the “seven chief zymotic diseases,” but during 1895 it asserted again its premier position among infectious diseases as a cause of heavy mortality.

The number of deaths directly ascribed to Influenza in Brighton since it first appeared in our midst has been as follows :—

Year.	No. of Deaths ascribed to Influenza.					No. of Deaths from Diseases of the Respiratory Organs.
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total for Year.	
1889	—	—	—	—	—	291
1890	18	5	—	—	23	417
1891	37	27	7	—	71	381
1892	143	3	1	2	149	392
1893	8	8	6	11	33	343
1894	35	5	—	9	49	321
1895	82	17	1	7	107	411

It is not necessary for me to discuss further the subject of Influenza, except to draw attention to the fact that it is a new enemy to life and health, so far at least as the present generation is concerned ; a fact which must be borne in mind in interpreting death statistics, especially those of a health resort like Brighton, whose population is being constantly replenished by invalids and convalescents. For further remarks on this subject see page 21.

DEATHS FROM TUBERCULAR DISEASES.

A special importance attaches to tubercular diseases, in view of the fact that they are due essentially to the entrance into the system of a special micro-organism, the tubercle-bacillus. The majority of those thus receiving infection are happily able to resist its development. In weaker persons, however, and particularly in those with a family predisposition to the disease, the reception of the infection is followed by the slow development of tuberculosis.

The great dangers associated with the consumption of milk and meat from tuberculous cows have received important confirmation from the report of the Royal Commission on Tuberculosis ; and public opinion is gradually being educated on the question. This is shown by the greater frequency with which milk is now boiled ; and by the stricter supervision of meat supplies. The great defect at present is the inequality of administration, as regards the inspection of both cowsheds and meat. In the majority of rural districts the supervision is merely nominal, and urban populations suffer in consequence.

It will be seen from the following figures that some improvement in the mortality from consumption has been secured :—

Mean Annual Death-Rate in Brighton from Phthisis (Consumption) and other Tubercular Diseases per 100,000 Persons in Groups of Years.

	Phthisis.	Other Tubercular Diseases.
Ten years, 1861-70	295	98
Ten years, 1871-80	247	78
Three years, 1881-83	193	?
Three years, 1884-86	169	?
Four years, 1887-90	169	?
Three years, 1891-93	150	81
1894	152	87
1895	167	74

During 1895, the deaths from Consumption numbered 200. In 165 of these it was found practicable to make inquiries into the history and environment of the deceased. There was clear evidence that in at least 22 out of the 165, or 13'9 per cent., the illness dated from some time precedent to the time of coming to live in Brighton. In not a few cases death occurred within a few

weeks after the patient came to Brighton. Such sending patients to the sea-side in the last stages of disease is to be deprecated from the standpoint both of the patient and the town.

Of the 22 cases in which a definite history was obtainable, three had lived less than 1 month in Brighton at the time of their decease; three between 1 and 3 months; three between 3 and 6 months; four between 6 and 12 months; two between 1 and 2 years. In the remaining seven the symptoms dated from a period previous to settling in Brighton. It will be noted that this statement is necessarily incomplete. In 35 cases no inquiry was practicable, and there is reason to believe that the majority of these were temporary residents in the town.

In 57 houses in which consumptive patients had died, the sick-rooms were thoroughly cleansed and disinfected, and thus danger to the next occupants of the rooms avoided.

DEATHS FROM VIOLENCE, &c.

During the year 58 deaths were due to some form of violence. In 101 cases inquests were held, the verdicts returned being as follows:—

1—NATURAL CAUSES 44

2—SUICIDAL—

Drowning	1
Poisoning	5
Cutting throat	4
Hanging	3
Shooting	1
Throwing himself in front of train	1
	— 15

3—ACCIDENTAL—

Suffocation	9
Falls... ..	17
Burns	5
Poisoning	1
Scalds	2
Exhaustion from exposure to weather	1
Run over	3
Bursting of a firework bomb at Preston Park	1
Swallowing a bronze coin	1
	— 40

4—OPEN VERDICT—

Found drowned	1
----------------------	---

5—HOMICIDAL—

Cutting throat	1
-----------------------	---

Total	101
--------------	-----

UNCERTIFIED DEATHS.

In 36 cases, *i.e.*, 1·6 per cent. of the total deaths, the cause of death was not medically certified, as compared with 1·5 per cent. in the preceding year.

THE WEATHER OF 1895.

A.—Abnormally Cold Weather.

The first quarter of 1895 was characterised by weather of a most exceptional character. No equally severe frost has occurred for 80 years. In January the minimum temperature in the shade was at or below freezing point (32° Fahr.), on twenty out of the thirty-one days. The lowest temperature, $23^{\circ}\cdot4$, was reached on the 29th of the month. From the 26th day to the end of the month, the minimum temperature was daily below 32° . The highest daily maximum temperature of the month was $48^{\circ}\cdot6$ on the 19th, and the lowest daily maximum was $30^{\circ}\cdot0$ on the 28th.

During February the frost continued until the 20th inst., when the minimum temperature was $27^{\circ}\cdot8$. Next day it was $34^{\circ}\cdot4$ and a very slow thaw set in, the minimum temperature being still below freezing point from the 26th to the 28th inclusive. The lowest temperature of the month was on the 6th and the 8th, on each of which days it fell to $17^{\circ}\cdot4$. The maximum temperature from the 1st to the 20th February never exceeded $40^{\circ}\cdot8$ (a temperature which was reached on the 19th), and on the 6th of the month it only reached $24^{\circ}\cdot8$.

In March the minimum temperature was $25^{\circ}\cdot6$ and $25^{\circ}\cdot4$ on the 3rd and 4th inst. respectively. In the remainder of the month,—with the exception of the 11th and the 14th, when the minimum temperature fell to $31^{\circ}\cdot0$, and to $30^{\circ}\cdot2$ respectively,—there was no frost after the 6th, the average minimum temperature for the whole month being $36^{\circ}\cdot3$. The average maximum temperature for the month was $46^{\circ}\cdot3$, the highest being $56^{\circ}\cdot0$ on the 20th, and the lowest $37^{\circ}\cdot6$ on the 3rd.

EFFECT ON WATER SUPPLY.—Weather of such severity could not fail to be followed by most injurious consequences. The most obvious of these was the wide-spread bursting of water-pipes. In connection with this may be mentioned the daily readings of a thermometer placed at a depth of 4 feet in the earth, in the Municipal Climatological Station on the Old Steine. It is well known that the temperature of the earth increases with the depth, and that the soil varies in temperature with a slowness and minuteness which is in striking contrast with the variations of the air temperature.

During January the 4 feet earth temperature gradually fell from $46^{\circ}\cdot4$ on the 1st to $41^{\circ}\cdot4$ on the 30th. In February the earth temperature further fell from $41^{\circ}\cdot2$ on the 1st to $38^{\circ}\cdot0$ on the 28th. It remained steady at $38^{\circ}\cdot0$ from the 23rd February to the 11th of March, on which day it rose to $38^{\circ}\cdot4$, and then

slowly rose to 44°o on the 31st. Thus the earth temperature was lower during the 16 days following the gradual break-up of the frost than in any of the preceding weeks. The instances where pipes have burst at a considerable depth are explicable by the continuity of metallic iron and lead pipes (good conductors of heat) from the surface to the deeper level, and by the fact that water at or close to the freezing point is carried in the pipes to the deeper level.

The bursting of water-pipes caused considerable disorganization of sanitary appliances, but owing to the prompt and efficient action of the Waterworks Department, I am unable to mention a single household in which illness was ascribable to water.

EFFECT ON THE VITALITY OF THE OLD.—Interference with water-supply was, unhappily, not the only misfortune connected with the severe frost. The effect of a short spell of severe weather in lengthening the obituary column of the *Times* is well known. What the unthinking describe as “seasonable weather” is to the old a forerunner of death. When such “seasonable weather” is protracted, its effects become intensified. A short spell of it will kill the aged who are deficient in means to obtain the necessary warm clothing and fuel and food; a longer spell reaches those who have these necessities, and its effects are visible for some weeks after the thaw which follows it. Indeed, the thaw, especially if slow in progress, is even more dangerous than the preceding frost, the ill effects of dampness being added to those of dry cold. This is abundantly clear in the following table:—

Week ending	Weekly Deaths in Brighton at ages				Total Deaths at all Ages.	Annual Death-rate for each week.	No. of Deaths returned as due to Influenza.	No. of Deaths from Chest Affections.	Air Temperature for each week.	
	60-70	70-80	80-90	over 90					Maximum.	Minimum.
Jan. 5	4	6	2	—	55	24·0	2	16	$42^{\circ}\cdot6$	$28^{\circ}\cdot4$
„ 12	7	5	5	2	49	21·4	1	12	$44^{\circ}\cdot0$	$25^{\circ}\cdot6$
„ 19	9	5	1	—	47	20·5	2	10	$48^{\circ}\cdot6$	$29^{\circ}\cdot6$
„ 26	4	3	3	—	31	13·5	—	10	$48^{\circ}\cdot4$	$25^{\circ}\cdot4$
Feb. 2	4	11	4	—	56	24·4	1	10	$34^{\circ}\cdot8$	$21^{\circ}\cdot8$
„ 9	1	4	6	1	38	16·6	1	6	$36^{\circ}\cdot0$	$17^{\circ}\cdot4$
„ 16	5	12	3	—	53	23·1	—	9	$38^{\circ}\cdot0$	$19^{\circ}\cdot6$
„ 23	8	9	4	2	61	26·6	2	11	$44^{\circ}\cdot4$	$24^{\circ}\cdot2$
Mar. 2	16	8	5	1	74	32·3	6	20	$43^{\circ}\cdot0$	$28^{\circ}\cdot8$
„ 9	13	17	10	—	92	40·1	13	46	$42^{\circ}\cdot6$	$25^{\circ}\cdot4$
„ 16	21	15	14	1	110	48·0	23	47	$54^{\circ}\cdot2$	$30^{\circ}\cdot2$
„ 23	11	19	15	1	108	47·5	23	42	$56^{\circ}\cdot0$	$34^{\circ}\cdot4$
„ 30	11	12	9	—	84	36·6	8	21	$53^{\circ}\cdot8$	$39^{\circ}\cdot8$
	114	126	81	8	858	28·7	82	260		

It is evident from this table that from the week ending February 16th onwards, we had to deal with an additional maleficent agent. Influenza, which had been slightly prevalent throughout the earlier part of the quarter, became epidemic almost coincidently with the thaw of the 21st of February, in a fashion which can only be described as "explosive." It was as if the infection, which had been imprisoned in the frost-bound earth, was released by its thawing and generally disseminated.

That we should be so comparatively helpless in the presence of such a co-operation of a subtle infection with peculiar and exceptional atmospheric conditions, shews the limitations of our knowledge, and the necessity for further and anxious research.

SPECIAL INCIDENCE OF CHEST AFFECTIONS AND INFLUENZA IN BRIGHTON,—Chest Affections and Influenza (either directly or by the production of chest affections) are most fatal among the aged. Hence a population with an excess of old people will suffer more severely than another without such excess. In my annual report of 1894, I stated that for every 1,000 persons living at all ages there were at ages over 55, 121 in Brighton, as compared with 101 in Croydon. 93 in Huddersfield and 85 in Derby. Brighton therefore has a larger proportion of its population living at the ages most prone to fall victims to these diseases.

INFLUENCE OF VISITORS.—This is, however, not the only reason why in the ordinary course of events, Brighton might be expected to suffer exceptionally from the effects of severe and protracted frost and of Influenza and its complications. The population of Brighton was swollen by an exceptionally large number of visitors from London and other infected areas, during February and March. The number was so great that there was considerable difficulty in securing accommodation. It has been found impracticable to make any deduction of deaths of visitors occurring in private houses or hotels. It may be said, therefore, that during the first quarter of 1895 Brighton has paid the necessary penalty of its popularity as a resort of convalescents and invalids; a penalty which must, in the presence of Influenza, be paid so long as Brighton retains its reputation, without in the least reflecting upon its sanitary condition.

HOW TO PREVENT INFLUENZA MORTALITY.—The death-rate was lowest during the first quarter in the Kemp Town and Preston Park Wards. This shews that the necessary condition of protection is freedom from opportunities of infection. The inhabitants of the Kemp Town and the Preston Park Wards live in detached parts of the town, have the social comforts necessary for maintenance of strength against the effects of cold, and do not mingle freely with others. The obvious moral is that if aged persons are to be kept well during an epidemic of Influenza, they must eschew social intercourse and all public assemblies. The experience of the Borough Sanatorium is particularly instructive in this respect. During three epidemics, the staff and patients of this Institution were free from attack. In the late epidemic, a patient was admitted for supposed scarlet fever,

but her illness proved to be influenza, and in a few days thereafter, several cases occurred among the nurses and wardsmaids. The preceding remarks from the commencement of the paragraph on weather to this point are abbreviated from my report for the first quarter of 1895.

B.—Abnormally Hot Weather.

The exact meteorological data for each month of 1895 are summarised in tables XI. and XI.A, pages 30 and 31. Further details are embodied in the tables on pages 15 and 19. The total rainfall was 25·2 inches as compared with an average of 30·3 for 18 years. In 1894 the amount was 31·9 inches, but in 1892 and 1893 it was 26·5 and 24·1 inches respectively, there being thus three years of deficient rainfall out of four.

The weather from midsummer onwards has a special importance in relation to diarrhoea.

Its exact character may be studied in the Table on page 15. Not only was the rainfall deficient and the air temperature high, but the temperature of the soil remained persistently high.

APPENDIX OF STATISTICAL TABLES.

Table I. is given on page 29.

TABLE II.—*Comparison of Births and Deaths in Successive Years.*

Years.	Births.	Birth-Rate per 1,000 inhabit- ants.	Deaths from all Causes.	Death- Rate per 1,000 inhabit- ants.	Death-Rate from the seven chief Infectious Diseases per 1,000 inhabitants.	Death-Rate under one year of age per 1,000 births.
1882	3284	30·2	2372	21·8	4·40	187
1883	3236	29·6	2131	19·5	2·50	160
1884	3248	29·1	2064	18·8	1·77	162
1885	2981	26·9	1952	17·6	1·43	132
1886	2957	26·5	1986	17·8	1·97	160
1887	3038	27·0	1988	17·7	2·33	148
1888	2791	24·6	1928	17·0	1·42	149
1889	2964	26·0	1833	16·1	1·60	131
1890	2915	25·4	2232	19·1	2·57	164
1891	3031	26·2	2097	18·2	1·06	137
1892	2958	25·1	2232	18·9	2·09	151
1893	2981	25·3	2165	18·4	1·84	169
1894	3055	25·8	1943	16·4	1·20	137
1895	3057	25·6	2250	18·8	1·72	164

TABLE III.

Borough and Sub-Districts.	Population estimated to the middle of 1895.				Annual Rate per 1,000 of the Estimated Population.			Density of population stated as Persons per Acre.
		Births	Deaths.	Deaths from 7 chief Zymotic Diseases.	Birth-rate.	Death-rate.	Death-rate from the 7 chief Zymotic Diseases.	
SUB-DISTRICTS—								
Palace ...	20,149	278	308	12	13·8	15·3	0·59	80
Kemp Town...	15,127	260	257	20	17·2	17·0	1·32	79
St. Peter's ...	68,732	2111	1483	157	30·7	20·6	2·28	58
Preston ...	15,596	408	202	17	26·2	12·9	1·09	17
Entire Borough...	119,604	3057	2250	206	25·6	18·6	1·72	47

TABLE IV.

Ward.	Estimated population at the middle of 1895.	No. of persons to every aere.	Death-Rate per 1,000 living from			
			All causes.	The 7 chief Zymotic Diseases.	All Tubercular Diseases.	Bronchitis and Pneumonia.
Kemp Town ...	6,958	15	10·6	·57	·86	1·44
Queen's Park*	6,721	35	21·3	2·08	2·83	4·76
Pier ...	11,927	145	21·3	2·35	2·72	3·86
Pavilion ...	5,782	84	10·5	·52	1·38	2·25
Regency ...	7,958	102	16·3	·88	1·38	2·51
West ...	5,295	72	17·9	·38	1·32	3·02
Montpelier†	6,120	58	12·9	·49	2·29	·98
St. Nicholas ...	10,300	149	17·3	1·26	3·01	2·14
St. John's ...	11,986	157	21·7	2·75	2·25	5·26
Hanover ...	10,941	147	25·7	3·47	3·93	4·11
Lewes Road ...	11,199	41	23·3	2·68	2·95	4·11
St. Peter's ...	8,581	179	20·2	2·33	2·33	2·56
Preston Park ...	6,644	16	9·0	·90	1·05	1·50
Preston ...	9,547	19	15·1	1·15	1·36	1·88
	119,959	47	—	—	—	—

* Omitting 43 deaths in the Workhouse, the home-address of which was unknown, and which could not, therefore, be distributed to their respective Wards.

† Omitting 9 deaths in the Children's Hospital, the home-address of which was either unknown or out of Brighton.

TABLE V.—*Death-rate per 1000 living at each Age-Group, 1895.*

Aged.....	under 5	5—10	10—15	15—25	25—45	45—65	65 and upwards	All ages
SUB-DISTRICTS—								
Kemp Town	48·3	3·1	2·7	2·8	5·7	23·3	104·9	17·0
Palace ...	41·7	4·2	2·5	2·6	6·7	19·2	99·0	15·3
St. Peter's ...	75·4	3·2	2·9	3·9	8·4	26·3	90·4	20·6
Preston ...	32·7	3·1	1·3	3·1	5·2	22·3	74·3	12·9

TABLE VI.—*Infantile Mortality in each Sub-District of Brighton.*

	Death-rate per 1,000 Infants.					
	1890	1891	1892	1893	1894	1895
Palace ...	120	122	140	155	115	129
Kemp Town ...	199	150	125	193	154	123
St. Peter's ...	185	146	165	174	145	189
Preston ...	100	89	91	114	96	93
Borough of Brighton	164	137	151	169	137	164

TABLE VII.

CAUSES OF DEATH IN BRIGHTON DURING THE YEAR 1895.	Total Deaths.	SEX.		AGES AT DEATH.			
		Male.	Female.	0—1	1—5	5—10	10 - 15
Small Pox	—	—	—	—	—	—	—
Measles	24	15	9	3	19	1	1
Whooping Cough	41	16	25	16	24	1	—
Enteric Fever	14	9	5	—	—	—	1
Diarrhœa	103	54	49	82	15	—	—
Diphtheria	19	11	8	—	13	5	—
Scarlet Fever	5	4	1	1	2	1	—
Puerperal Fever	4	—	4	—	—	—	—
Erysipelas	4	—	4	—	—	—	—
Other Zymotic Diseases	5	5	—	4	—	—	1
Influenza	107	38	69	6	3	1	—
Phthisis	200	107	93	2	6	5	9
Tabes Mesenterica	19	12	7	11	7	—	—
Brain Tubercle	35	17	18	10	20	3	—
Other Tubercular Diseases	35	23	12	1	13	5	3
Cancer Malignant Disease	107	41	66	—	—	—	1
Gout and Rheumatism	12	10	2	—	—	2	—
Other Constitutional Diseases	28	9	19	2	2	—	1
Parasitic Diseases	2	1	1	2	—	—	—
Dietic	10	7	3	2	—	—	—
Nervous Diseases, excluding Convulsions	166	84	82	11	9	5	4
Convulsions	38	20	18	23	13	1	—
Diseases of Organs of Special Sense	1	—	1	—	—	—	1
Circulatory	175	86	89	4	—	—	3
Respiratory	411	176	235	77	103	6	—
Digestive	117	54	63	32	9	1	6
Generative	13	2	11	—	—	—	—
Urinary	55	29	26	1	1	2	—
Locomotory	4	3	1	—	—	—	—
Integumentary	4	3	1	2	—	—	—
Lymphatic	1	—	1	—	1	—	—
Premature birth and low vitality	106	61	45	106	—	—	—
Congenital defects and malformations	8	3	5	8	—	—	—
Old age	210	78	132	—	—	—	—
Violence	58	30	28	7	8	2	1
Ill-defined	109	51	58	90	13	—	—
TOTALS	2250	1059	1191	503	281	41	32

TABLE VII. (*contd.*)

AGES AT DEATH.								Not certified	Inquest.	Visitors.
15—20	20—25	25—35	35—45	45—55	55—65	65—75	75 and upwards			
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	1
—	—	—	—	—	—	—	—	1	—	—
—	5	2	3	—	2	1	—	—	—	—
—	1	—	2	—	2	1	—	—	3	3
—	1	—	—	—	—	—	—	—	—	—
—	—	1	—	—	—	—	—	—	—	—
—	—	3	1	—	—	—	—	—	—	1
—	—	—	—	1	—	3	—	—	—	2
—	—	—	—	—	—	—	—	—	—	—
2	2	3	4	9	22	28	27	1	1	3
10	21	37	45	43	19	2	1	3	—	5
—	—	1	—	—	—	—	—	—	1	2
1	1	—	—	—	—	—	—	—	—	1
4	—	3	1	4	—	1	—	—	—	1
—	—	4	18	21	21	26	16	—	—	5
1	1	—	1	1	—	6	—	—	—	—
2	2	2	1	5	8	2	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	3	2	3	—	—	—	1	1
2	4	7	13	21	32	25	33	1	1	5
—	—	—	—	1	—	—	—	4	—	1
—	—	—	—	—	—	—	—	—	—	—
1	6	10	20	11	48	43	29	13	20	9
—	—	4	13	33	52	62	61	3	9	8
2	—	3	10	21	11	13	9	—	1	6
1	1	3	3	2	1	1	1	—	—	—
4	—	4	6	12	8	10	7	—	4	3
—	—	2	1	1	—	—	—	—	—	—
—	—	—	—	—	—	—	2	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	7	1	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	18	54	138	3	—	5
3	1	7	7	4	6	5	7	—	58	5
—	—	1	2	1	—	1	1	—	1	4
33	46	97	154	193	253	284	333	36	101	71

TABLE VIII.—*Annual Death-Rate per 100,000 of Population from Zymotic Diseases.*

	1861 to 1870	1871 to 1880	1881 to 1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Small Pox ...	22	8	4.3	0.9	0	0	0	0	0	0	0	0	0	0
Measles ...	43	27	53.5	30.6	9.8	64.0	2.7	40.3	53.1	24.2	99.3	11.0	30.3	20.7
Scarlet Fever ...	63	39	47.7	6.3	12.5	8.9	7.9	15.8	10.4	0.9	6.8	9.3	3.3	4.2
Diphtheria ...	26	8	7.5	16.2	18.8	26.7	21.2	8.8	12.2	10.4	19.5	30.0	21.9	15.2
Whooping Cough ...	60	46	56.0	40.6	60.0	27.6	43.2	23.7	88.7	18.2	18.7	46.7	11.9	34.3
Fever(chiefly Enteric)	53	24	25.5	16.2	11.6	11.6	13.2	15.8	11.3	11.2	6.8	12.7	9.3	11.7
Diarrhuca ...	121	106	66.7	32.4	84.1	91.7	53.8	56.1	81.8	40.6	57.7	73.8	43.8	86.1
Seven Chief Zymotic Diseases ...	388.0	258.0	261.2	142.2	196.8	232.8	142.0	160.5	257.5	105.5	208.8	183.5	120.5	172.2

TABLE IX.

			Number of infectious cases per 100,000 of population.	Number of deaths per 100,000 of population.	Case-mortality Number of deaths per 100 cases notified.
Diphtheria and Croup	...	1892	94	19	20·2
		1893	157	29	18·4
		1894	104	22	21·1
		1895	171	15	8·8
Scarlet Fever	... ..	1892	321	7	2·1
		1893	406	9	2·2
		1894	185	3	1·6
		1895	163	4	2·5
Enteric and Continued Fever	... ..	1892	54	7	12·7
		1893	65	13	19·5
		1894	69	9	13·0
		1895	72	12	16·6
Erysipelas	... ..	1892	81	6	7·4
		1893	145	12	8·3
		1894	82	5	6·0
		1895	57	3	5·3
Puerperal Fever	... ..	1892	4	5	125*
		1893	10	5	50
		1894	4	—	—
		1895	6	3	50

*Notification of cases evidently incomplete.

TABLE X.

	Number of Births Registered.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small Pox.	Dead Unvaccinated.	Postponed by Medical Certificate.	Removed to Districts the Vaccination Officer of which has been apprised, or removed to places unknown.
July 1st, 1893, to June 30th, 1894	2644	2127	11	—	273	76	120
July 1st, 1894, to June 30th, 1895	2713	1973	7	—	299	143	110

TABLE XI.

1895.

MONTH.	Temperature of air during the month.			Mean temperature of air.	Mean degree of humidity saturation = 100.	WIND.									RAINFALL.		Temperature of soil during the month.			
	Highest.	Lowest.	Mean of			Number of days of.								Number of days on which rain fell.	Amount collected in inches.	Highest.	Lowest.			
						All highest.	All lowest.	N.	N.E.	E.	S.E.	S.	S.W.					W.	N.W.	Calm.
JANUARY ...	48.6	23.4	39.8	35.7	89	8	7	—	3	2	5	1	5	—	22	2.55	46.4	41.4		
FEBRUARY ...	44.0	17.4	36.5	31.3	77	4	16	4	—	—	—	1	3	—	5	.15	41.2	38.0		
MARCH ...	56.0	25.4	46.3	41.3	89	3	4	1	1	2	10	—	6	4	20	1.89	44.0	38.0		
APRIL ...	64.6	32.4	51.9	46.9	86	1	7	1	2	3	9	3	3	1	14	2.27	49.0	44.0		
MAY ...	73.0	36.2	63.4	55.3	69	8	5	2	5	1	4	—	6	—	3	.19	54.0	49.4		
JUNE ...	77.4	39.4	67.5	59.6	70	9	6	1	2	1	6	1	3	1	10	.46	58.0	54.4		
JULY ...	72.4	47.8	67.5	61.8	76	2	2	1	1	2	15	1	6	1	14	2.39	60.0	58.2		
AUGUST ...	75.0	49.2	68.0	64.4	82	1	—	—	4	5	14	4	1	2	16	1.89	62.0	60.0		
SEPTEMBER ...	83.2	47.4	72.3	63.9	72	3	11	1	3	1	7	1	3	—	4	1.07	62.0	60.0		
OCTOBER ...	69.2	30.6	55.7	49.2	84	6	6	1	—	3	3	4	4	4	17	4.68	60.8	52.0		
NOVEMBER ...	61.8	35.0	54.4	50.1	89	1	2	4	5	6	5	4	2	1	23	4.36	52.4	50.2		
DECEMBER ...	53.4	30.0	46.7	42.3	92	3	3	4	2	1	2	5	8	3	20	3.29	50.2	45.4		
ENTIRE YEAR	83.2	17.4	55.8	50.0	81	49	69	20	28	27	80	25	50	17	168	25.19	62.0	38.0		

TABLE XIA.

Number of Hours of Bright Sunshine and Sunless Days in 1895.

(Campbell-Stokes Sunshine Recorder).

Hours of Bright Sunshine in Brighton.				Sunless Days in Brighton.			
				1895.	1894.	1895.	1894.
January	...	...	...	71·81	78·73	5	9
February	...	...	...	99·42	97·23	5	9
March	...	...	...	125·32	202·90	6	1
April	..	...	...	149·54	175·96	6	3
May	...	...	...	278·30	220·28	3	0
June	...	...	...	271·39	183·39	0	2
July	...	...	...	196·39	201·51	2	2
August...	...	...	..	242·48	159·96	1	1
September	...	...	..	254·21	146·05	0	5
October	...	...	...	128·13	92·54	8	5
November	...	...	...	57·82	95·16	9	8
December	...	...	...	42·13	63·06	16	13
Total for Year... ..				1916 94	1716·79	61	58

TABLE I.

Total and Illegitimate Births during the last 13 years.

Years.	Total Births.	Illegitimate Births.	Total Birth-Rate.	Illegitimate Birth-Rate.	Illegitimate Births per cent. of Total Births.
			Per 1000 Inhabitants.		
1883	3236	265	29·6	2·38	7·9
1884	3248	236	29·1	2·09	7·0
1885	2981	195	26·9	1·70	6·5
1886	2957	197	26·5	1·69	6·6
1887	3038	190	27·0	1·61	6·2
1888	2791	204	24·6	1·70	7·3
1889	2964	214	26·0	1·75	7·2
1890	2915	191	25·4	1·54	6·6
1891	3031	215	26·2	1·86	7·1
1892	2958	222	25·1	1·88	7·5
1893	2981	197	25·3	1·67	6·6
1894	3055	260	25·8	2·19	8·5
1895	3057	204	25·6	1·75	6·7

B.—SANITARY WORK OF THE YEAR.

Sanitary Inspections.

In the following tables the work of the Sanitary Department is stated, so far as it can be given in tabular form. It will be seen that 10,567 houses were visited in the course of house-to-house inspection, as compared with 9,774 in the previous year. This, however, does not represent the total number of houses visited during the year. Apart from house-to-house inspection, a large proportion of the time of the inspectors is occupied in attending to complaints received from householders in every part of the town. During last year 1,787 such complaints received attention, as compared with 1,961 in the previous year. In addition, 5,548 visits were made by the special inspector for purposes of investigation and disinfection after cases of infectious disease. In each of these cases it is the practice to take the opportunity of making a sanitary examination of the houses visited. 5,587 visits were made during the year to Slaughter Houses, 208 to Cowsheds, 185 to Bakehouses, 1,397 to Dairies and Provision Shops. The Common Lodging Houses have received 127 visits. In 232 houses the soil-pipe has been tested by the volatile tests : and 479 drains have been opened for examination.

TABLE XII.—*Inspections during 1895.*

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals for 1895.	Corres- ponding Total, 1894.
Number of Streets Inspected ...	73	72	97	122	364	349
Number of Houses and other Premises Inspected ...	1815	2585	2653	3514	10567	9774
Number of Complaints attended to ...	408	522	453	404	1787	1961
Number of Visits to Slaughter Houses ...	1504	1502	1230	1351	5587	6145
Number of Visits to Cowsheds ...	65	95	18	30	208	347
„ „ Bakehouses	—	—	—	185	185	197
„ „ Dairies and Provision Shops...	724	178	279	216	1397	1702
Number of Day Visits to Common Lodging-Houses ...	36	10	10	14	70	156
Number of Night Visits to ditto	17	6	23	11	57	51
„ Visits in respect of Sickness ...	1815	1466	1269	998	5548	5824
Number of Visits to Fumigate Rooms ...	97	113	109	151	470	401
Number of Visits for Removal of Bedding ...	59	49	45	129	182	259
Number of Drains tested by Volatile Test ...	40	57	58	77	232	238
Number of Drains Opened for Examination ...	95	120	138	126	479	600
Number of Smoke Observations	3	8	4	0	15	37
„ Visits for Sundry Purposes ...	896	970	764	2147	4777	3022
Number of Visits to look up Notices Served ...	2506	2288	3080	2830	10704	12451
Number of Attendances at Police Court ...	18	15	18	8	59	25
Number of Notices Served for Town Clerk ...	92	36	7	16	151	584
Number of Samples Collected for Analysis ...	12	24	53	16	105	113
Number of Visits to Offensive Trades ...	—	13	—	—	13	17
Number of Inspections of Stables	176	80	79	397	732	151
„ Wastes of Water re- ported ...	93	93	133	117	436	565
Number of Letters sent to Schools and Public Library ...	157	101	54	86	398	515
Markets Committee (1 Inspector)	—	—	—	—	10 days	10 days
Meteorological Observations taken ...	90	91	92	92	365	365
Visits to Schools ...	231	108	142	256	737	520
Number of Visits under Factory & Workshops and Shop Hours Act ...	888	951	932	1077	3848	4677
Number of Visits for Contagious Diseases Animals Committee...	27	132	17	—	176	145
Drains flushed ..	—	—	—	33	33	—

The Sanitary Inspections enumerated in Table XII. have been followed by the serving of the notices given in Tables XIII. and XIV. A very large proportion of the work is done on the strength of verbal recommendations or preliminary “warning” notices.

TABLE XIII.—*Notices served on Owners during 1895.*

Nature of Notice.		Warning and Verbal Notices.			Final Notices.		Notices served in 1894 complied with since issue of last Annual Report.	Total Number of Notices on owners complied with.
		Number served.	Number complied with before service of final notice.	Number reported for final notice.	Number served.	Number complied with.		
Public Health Act.	To drain into sewer and fill up cesspools	14	3	11	19	19	—	22
	To relay drain and fill up cesspools ...	11	7	4	5	5	—	12
	To relay drain ...	388	251	137	154	154	2	407
	To repair drain and soil pipe ...	286	149	137	157	157	1	307
	To trap drain ...	496	280	216	204	204	4	488
	To cleanse & white-wash rooms ...	263	144	119	122	122	2	268
	To clear drain or soil pipe ...	151	23	128	115	115	—	138
	To clear, repair or cleanse closet, or repair flushing apparatus or pan...	1422	719	703	695	695	15	1,429
	To repave yard or scullery ...	528	263	265	267	267	11	541
	To pave and drain stables ...	13	7	6	4	4	—	11
	To abate other nuisances ...	719	363	356	316	316	8	687
	To provide covered dust bins ...	577	243	334	440	440	59	742
	To lay on water to closet ...	179	94	85	94	94	3	191
	To alter water pipes	11	2	9	9	9	—	11
Brighton Improvement Act.	To cause waste pipes to discharge into outer air ...	29	15	14	17	17	—	32
	Totals ...	5,087	2,563	2,524	2,618	2,618	105	5,286

TABLE XIV.—*Notices served on Occupiers during 1895.*

Nature of Notice.	Warning and Verbal Notices.			Final Notices.		Notices served in 1894 complied with since issue of last Annual Report.	Total number of notices on occupiers complied with.
	Number served.	Number complied with before service of final notice.	Number reported for final notice.	Number served.	Number complied with.		
Public Health Act.	To relay drain ...	1	1	...	...	...	1
	To repair drain and soil pipe ...	6	5	1	...	...	5
	To trap drain ...	18	11	7	...	...	11
	To cleanse and white-wash rooms ...	46	31	15	4	4	35
	To clear drain or soil pipe... ..	32	17	15	18	18	35
	To clear, repair or cleanse closet, or repair flushing apparatus or pan...	398	269	129	108	108	377
	To repave yard or scullery ...	23	20	3	1	1	21
	To pave and drain stables ...	1	1	...	...	...	1
	To abate other nuisances ...	114	86	28	17	17	103
	To discontinue keeping animals so as to be a nuisance ...	162	94	68	63	63	157
Brighton Improvement Act.	To abate overcrowding ...	96	56	40	53	53	112
	To abate smoke nuisance ...	4	3	1	1	1	4
	Cleanse and white-wash bakehouses...	127	110	17	10	10	120
	Cleanse and white-wash workrooms ...	16	14	2	5	5	19
	To discontinue to let or occupy cellar dwellings ...	8	2	6	8	8	10
	Cleanse premises and remove all foul accumulations ...	456	291	165	156	156	447
	To lay on water to closet ...	3	3	...	...	...	3
Totals ...	1511	1014	497	444	444	3	1461
Total of notices served on owners ...	5087	2563	2524	2618	2618	105	5286
Total notices served ...	6598	3577	3021	3062	3062	108	6747

The increased readiness with which notices are complied with has been continued during 1895, as evidenced by Tables XV. and XVI.

TABLE XV.

Date of Annual Report.	Year under Report.	Percentage of notices not complied with at time of issue of Report.
March 23rd, 1889	1888	20 per cent.
February 13th, 1890	1889	14 "
March 31st, 1891	1890	4.3 "
March 16th, 1892	1891	3.2 "
April 21st, 1893	1892	1.3 "
April 13th, 1894	1893	0.8 "
April 15th, 1895	1894	1.3 "
June 20th, 1896	1895	0.0 "

The number of summonses for sanitary defects which it has been found necessary to issue in successive years is given in the following table :—

TABLE XVI.

Offence.	1889	1890	1891	1892	1893	1894	1895
Failing to abate nuisances ...	20	16	21	4	4	4	4
Failing to lay on water to closets	36	11	13	6	3	—	—
Failing to alter water pipes ...	—	—	—	1	—	—	—
Failing to canse waste pipes to discharge in open air ...	—	1	—	—	—	—	—
Totals	56	28	34	11	7	4	4

Housing of the Working Classes Act.

Official representations have been made by me under Part II. of the above Act during 1895, that the following premises are in a state so dangerous to health as to be unfit for human habitation :—

Situation of Premises.	No. of Houses.	Legal Proceedings taken.	Result.
Ivory Place ...	5	Summons issued.	Closing order made and houses closed.
Air Street ...	1	None.	House put into thorough repair.
Sussex Street ...	1	"	House sold to Corporation and demolished.
Freshfield Road ...	1	Summons issued.	Closing order made and house demolished.
Francis Street ...	3	"	Closing order made and houses closed.
Barrowcliffe Cottages ...	6	None.	Houses closed and since demolished.
Sweet Patch ...	5	Three summonses issued.	Houses repaired.
Albion Street ...	2	None.	One house closed and the other put into thorough repair.
Nelson Street ...	1	"	House put into thorough repair.

Common Lodging Houses.

Another year has passed without any further accommodation being provided for the occupants of the 15 common lodging houses (accommodating 270 lodgers) who were displaced from the Cumberland Place condemned area.

There are now three common lodging houses in the town, accommodating 53 persons. Of these, only one, accommodating 36 persons, is in a satisfactory condition.

During 1895, two summons were taken out, one against the keeper of a common lodging house for allowing two persons of the male sex above the age of 10 years to sleep in one bed (fined 40s. and costs); and one against a Russian Jew, who cannot speak English, for keeping a common lodging house without being registered (fined 40s. and costs).

Water Supply.

During the past year, 11 taps connected with closet cisterns have been removed, 616 new constant water services have been laid on within the Borough; and 342 services have been changed from the intermittent to the constant service.

136 Houses have been reported to the Sanitary Committee during the year as without a proper water supply. Of these 133 have complied with the notices served and 3 are in hand.

During the year, 436 wastes of water were reported to the Waterworks Department.

Sale of Food and Drugs Act.

Number of samples collected during the year 1894	102
" " adulterated " "	5
" Prosecutions " "	2
" Convictions " "	1
Dismissed	1
Aggregate Amount of Fines	£2 0 0
Analyst's Fees recovered	0 5 0
	<hr/>
	£2 5 0
	<hr/>
Cost of Samples	£1 11 2½
Cost of Analysis	17 0 0
Inspector's Salary	12 0 0
	<hr/>
	30 11 2½
Fines and Analyst's Fees recovered	2 5 0
	<hr/>
Cost of working the Act over amount recovered	28 6 2½
	<hr/>

The samples collected were:—spirits 6, milk 80, butter 10, lard 6—
Total 102.

All the samples of spirits and lard were genuine.

Of the samples of milk, 3 were adulterated with added water, 6, 7, and 14 per cent. respectively, and one deficient in butter fat 15 per cent.

A fine of £2 was inflicted in the case of the 14 per cent. adulteration of milk with added water. No action was taken in the minor adulterations of milk.

TABLE XVII.

Meat Seized or Surrendered during the year 1895.

Description.	No. of animals.	No. condemned by Magistrate.	No. destroyed by arrangement with owner.	Total weight in lbs.
A.—At the Abattoir—				
Bullocks (whole carcase) ...	2	—	2	1320
„ (part of carcase) ...	3	—	3	150
Pigs (whole carcase) ...	5	2	3	636
„ (part of carcase) ...	30	—	30	222
Sheep (whole carcase) ...	2	—	2	150
„ (part of carcase) ...	5	—	5	15
B.—In Private Slaughter-houses and Shops—				
Bullocks (whole carcase) ...	10	1	9	6243
„ (part of carcase) ...	11	3	8	1299
Sheep (whole carcase) ...	6	4	2	248
Pigs (whole carcase) ...	1	—	1	130
„ (part of carcase) ...	2	1	1	120
Wild Rabbits ...	11	11	—	20
	88	22	66	10553

OTHER FOODS.

The following articles were destroyed during the year as being unfit for food:—

Crabs 18, Spanish nuts 24 bushels, lemons 50, cherries 3 bushels, pears 65 bushels, plums 12 gallons.

THE PUBLIC ABATTOIR.

1895 is the first complete year of working at the Abattoir.

The following statement gives the number of animals slaughtered in the public and private slaughter-houses in connection with the Abattoir :—

Year.	In the Public Slaughter-Houses					In the Private Slaughter-Houses					Total.
	Beasts.	Calves.	Sheep.	Lambs.	Pigs.	Beasts.	Calves.	Sheep.	Lambs.	Pigs.	
1895	89	95	694	113	4182	187	71	1231	329	—	6991

I stated in my last annual report that the use of the Abattoir is minimised by the present difficulties in connection with unloading cattle at the siding. These difficulties still continue, animals having to be driven through the streets to reach the Abattoir. It is essential that this should be remedied to ensure the full natural development of work at the Abattoir.

Shop Hours Act.

During 1895, no complaints have been received from employés or others that young persons (under 18 years of age) have been employed for more than the 74 hours per week allowed by the Act. Inspector Mills has visited the shops and found the notices of the requirements of the Act properly affixed. The fact that in nearly all the shops in Brighton one short day is kept, explains the ease with which the requirements of this Act have been carried out.

Factory and Workshops Acts.

During 1895, Inspector Mills has made 3,848 visits under this Act. As arranged, when this special work was undertaken in 1893, the special inspection under this and the previous Act has been combined with a complete sanitary inspection of all the shops and workshops visited, thus avoiding the necessity for a separate visit of sanitary inspection.

The following notices, all of which have been complied with were served in connection with this Act :—

Animals kept in a dirty state	...	...	...	...	...	21
Bakehouses, requiring cleansing or whitewashing	...	...	...	...	...	139
„ without ventilation	...	...	...	...	...	2
„ with drains opening in	...	...	...	...	...	9
„ closets communicating with	...	...	...	...	...	2
Closets choked	...	...	...	...	...	3
„ defective	...	...	...	...	...	18
Carried forward	...	...	...	...	...	194

	Brought forward	...	...	194
Closets, flushing apparatus defective	..	...	...	61
„ without ventilation	...	...	...	7
„ pans foul	...	...	...	41
„ without water supply	...	...	...	23
Drains choked	...	...	...	8
„ traps choked	...	...	...	7
„ untrapped	...	...	...	37
„ ventilators opening below windows	...	...	...	5
Paving of yards and washhouses defective	...	...	...	29
Premises without proper water supply	..	...	...	15
„ „ „ dustbins...	...	...	...	24
„ in a dirty state	...	...	...	13
„ drained into cesspools	...	...	...	2
Refuse receptacles foul	...	...	...	3
Rooms overcrowded	...	...	...	9
Roof leaky	...	...	...	1
Soil pipe defective	...	...	...	8
Sinks with defective wastepipes	...	...	...	17
„ in a dirty state	...	...	...	8
„ leaky	...	...	...	5
„ waste pipe connected to drain	...	...	...	1
Stable without drainage	...	...	...	1
Urinals defective	...	...	...	3
„ foul	...	...	...	2
Workshops requiring cleansing and whitewashing	...	...	...	51
„ without proper ventilation	...	...	...	10
„ overcrowded	...	...	...	16
„ without separate closet accommodation	...	...	...	1
Water for drinking purposes drawn from w.c. cistern	...	...	...	2
Yards in a dirty state	...	...	...	16
„ without drainage	...	...	...	2
Total...				622

A large share of the foregoing visits were made to Bakehouses. The sanitary condition of these has received special attention during 1895. I specially reported on bakehouses in my report for the 3rd quarter of 1895, and need not go fully into the question here. The number and condition of underground bakehouses were carefully investigated.

Of the total 172 in use,

60 are above the ground level,

3 are in half basements,

7 have the ceiling from 1 to 2 feet above level of adjoining street,
 14 have the ceiling ranging from level with street to 1 foot above,
 96 have the ceiling ranging from level with street to 1 foot below,
 3 have the ceiling more than 1 foot below level of street.

The exact number of each of these kinds of bakehouses, and their relationship to the adjoining street-level, can be seen at a glance from the accompanying diagram, which is drawn to scale.

It is satisfactory to note that under the Act of 1895, no further bakehouses will be allowed to be built underground.

As required by sec. 3 of the Factory and Workshops Act, 1891, information has been sent to H.M. Inspector of Factories, in respect of 72 workshops (including bakehouses) in which children, young persons or women are employed, as compared with 143 in the preceding year. It may be mentioned that this results in the Inspector sending an abstract of the workshop regulations to the premises in question, and subsequently visiting them to ensure that no children, young persons or women are employed beyond the time specified in the Act.

H.M. Inspector of Factories has, on the other hand, complained to us of 5 premises requiring cleansing, &c.

The new Act of 1895 will throw considerable additional work on the Local Authority, especially as regards air-space, a register requiring to be kept of the capacity of each of the 3,000 or more workrooms in Brighton.

Under this Act, a notice must be exhibited in each room, stating the number who may be employed therein, the minimum space for each person being 250 cubic feet, or 400 cubic feet when overtime is being worked. A card, measuring 6 by 9 inches, of which the following is a copy, is affixed in each workroom. The card is numbered, the number corresponding with the entry in the register.

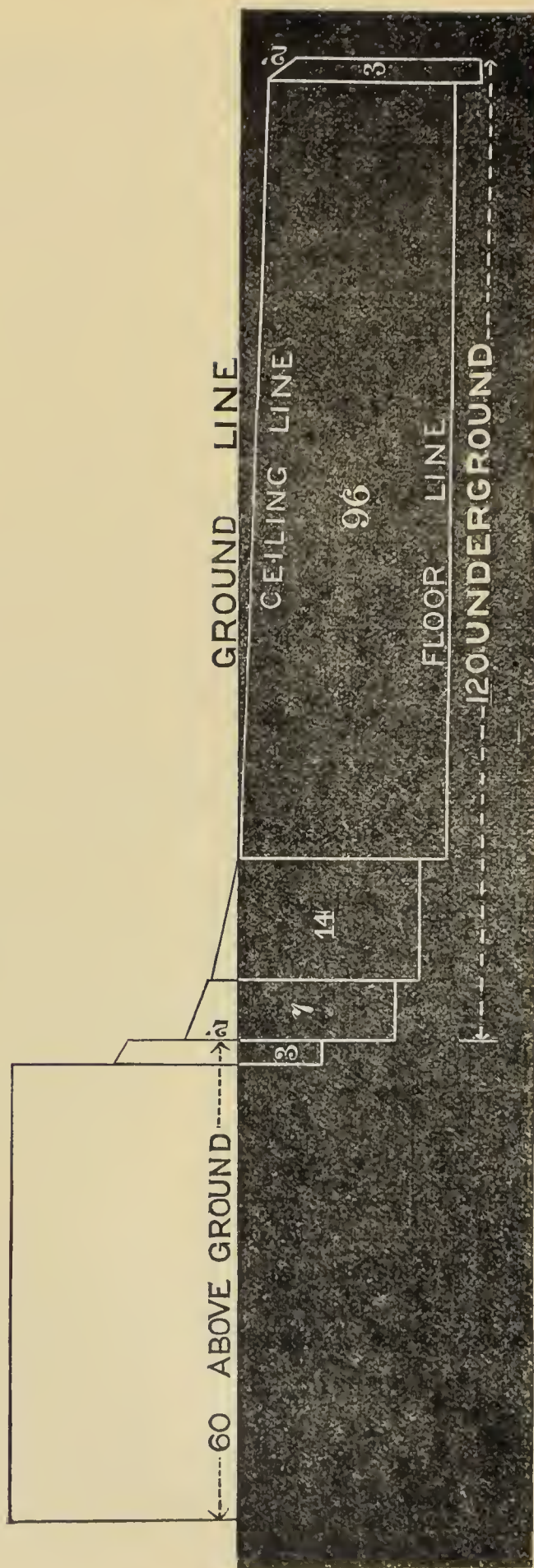


Diagram shewing the Number of Bakehouses in Brighton, above and at various depths below the ground-level.

BOROUGH OF BRIGHTON.

Factory and Workshop Acts.

Situation of Workroom_____

This workroom has accommodation for _____ persons ;

When working overtime for _____ persons only.

The above numbers assume that the means of ventilation are kept in working order.

Date of last cleansing or lime-washing.

The form of card has received the special approval of H.M. Factory Inspector for the district, and has been largely adopted by other local authorities.

C.—BOROUGH SANATORIUM.

NEW SANATORIUM.

The New Sanatorium, the building of which, it was hoped, might have been begun during last year, is still existent only on paper. Delay has arisen in connection with restrictions imposed by the Local Government Board, in addition to the one already accepted by the Town Council, binding them to find a new site for the treatment of Small Pox, when the new Sanatorium was completed. These restrictions were concerned with the removal of the disinfecting station from its present position near a boundary wall (to which the Town Council agreed), and with the suggested removal of the corrugated iron building, the back offices of which are not more than 40 feet from the boundary walls, in accordance with the requirements of the Board. It has finally been arranged (in 1896) that the corrugated iron building shall be allowed to remain for five years. There appears, therefore, at the time of writing to be no further obstacle to the securing of tenders for the erection of such portions of a new Sanatorium as have been decided upon. In the meantime the work of the present Sanatorium is being carried on under serious disadvantages, with which the members of the Sanitary Committee are familiar.

The following table gives a summary as to patients treated in the Borough Sanatorium during 1895 :—

TABLE XVIII.—*Number of Patients during 1895.*

DISEASE.	Remaining in the Hospital on Dec. 31st, 1894.	Admitted during 1895.	Total number treated during 1895.	Number discharged during 1895.	Number who have died in the Hospital during 1895.	Remaining under treat- ment on Dec. 31st, 1895.
Scarlet Fever...	12	151	163	138	4	21
Enteric Fever...	1	11	12	7	2	3
Measles ...	—	15	15	15	—	—
Diphtheria ...	6	90	96	87	7	2
Small Pox ...	—	5	5	5	—	—
Other Diseases	—	5	5	4	—	1
Quarantine ...	—	7	7	7	—	—
TOTALS ...	19	284	303	263	13	27

The number of patients admitted into the Sanatorium is compared with the corresponding numbers in previous years in the following table :—

TABLE XIX.

DISEASE.	1881 (four months)	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Scarlet Fever ...	23	88	56	157	73	102	147	106	297	162	114	276	352	227	151
Diphtheria ...	...	1	...	2	3	3	11	10	5	5	12	43	33	54	90
Typhoid Fever ...	20	5	27	17	12	12	16	48	61	5	4	26	14	11	11
Measles ...	...	2	9	3	2	4	11	6	83	9	16	1	4	1	15
Rötheln (German Measles) ...	...	1	1	...	...	...	...	...	...	...	...	...	1	1	...
Small Pox ...	21	16	...	2	1	5	...	...	1	...	...	...	9	3	5
Erysipelas ...	...	1	...	...	...	...	...	...	...	...	...	...	2	...	1
Whooping Cough ...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...
Chicken Pox ...	...	...	...	...	1	...	...	1	...	...	...	...	1	1	1
Other Diseases ...	...	...	...	...	...	...	...	1	...	3	6	6	3	4	3
Quarantine ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
TOTALS ...	64	114	98	181	92	126	185	172	447	184	152	352	419	302	284

The number of staff as compared with patients at the date of each meeting of the Sanitary Committee is shewn in the following table :—

TABLE XX.

DATE.	NATURE OF ILLNESS.						NUMBER OF STAFF.			Total No. of Patients.	Total No. of Staff.
	Scarlet Fever.	Enteric Fever.	Small Pox and Quarantine.	Diphtheria.	Measles.	Other Diseases.	Matron.	Nurses.	Servants, including Porters, Gardener, Cook, Laundresses, Wardmaids and Housemaids.		
January 9th ...	10	—	—	4	—	—	1	8	12	14	21
„ 30th ...	19	—	—	9	1	—	1	7	12	29	20
February 13th ...	14	—	—	7	—	—	1	7	11	21	19
„ 27th ...	17	—	3	—	—	—	1	5	12	20	18
March 13th ...	16	—	3	4	1	—	1	6	13	24	20
„ 27th ...	15	1	5	3	3	—	1	8	14	27	23
April 10th ...	16	2	2	1	1	—	1	8	14	22	23
„ 24th ...	13	2	1	5	3	—	1	7	13	24	21
May 8th ...	12	2	—	6	1	—	1	6	14	21	21
„ 29th ...	17	—	—	7	2	—	1	6	13	26	21
June 12th ...	17	—	—	6	3	—	1	6	13	26	21
„ 27th ...	22	—	—	3	2	—	1	6	13	27	22
July 10th ...	20	—	—	7	—	—	1	7	12	27	22
„ 25th ...	24	—	—	8	1	—	1	6	12	33	22
August 7th ...	20	—	—	7	—	1	1	6	12	28	22
„ 28th ...	24	—	—	6	—	1	1	7	13	31	22
September 11th ...	19	—	—	3	—	1	1	7	13	23	22
„ 25th ...	33	—	—	2	1	1	1	7	13	37	19
October 9th ...	33	—	—	10	—	1	1	7	13	44	19
„ 23rd ...	37	—	—	8	1	1	1	8	14	47	20
November 13th ...	25	—	—	2	1	—	1	7	14	28	21
„ 27th ...	31	5	—	5	—	—	1	7	14	41	19
December 11th ...	28	3	—	4	—	—	1	7	14	35	20
„ 18th ...	24	3	—	3	—	—	1	7	14	30	20

RETURN CASES OF SCARLET FEVER.—The occurrence of secondary cases of Scarlet Fever in the same family after the return of patients from the fever hospital has been a source of considerable anxiety to the medical officers of fever hospitals, especially in the metropolis. Such return cases do not appear to me to be due to any carelessness in disinfection of either the person or apparel of patients. It appears that in certain children the infection may lurk about the deep parts of the nose and throat, even after the skin is completely free from infection. To obviate this at the Sanatorium all patients have these parts irrigated with disinfectant solutions for several days before discharge. In this way the number of return cases has been kept at a very low level. During 1895, four such cases occurred in two families.

A boy aged nine years was admitted on March 6th (the fourth day of the disease) with scarlet fever, and discharged on April 22nd (the 51st day of the disease), having had no complications and being apparently quite well. On April 28th, his sister, aged seven years, sickened with scarlet fever; and another sister, aged three years, who sickened on the 1st of May, apparently acquired it from her.

A girl, aged five years, was admitted on September 24th (the fourth day of the disease) with scarlet fever and discharged on November 5th (the 46th day of the disease), apparently quite free from any morbid condition of the nose or throat or other parts. On the 12th November, her two sisters, aged eight and four years respectively, were both admitted with scarlet fever, with which they sickened on the 10th. No flaw in the disinfection of the patients' home could be detected in this or the preceding case.

RELAPSE CASES OF SCARLET FEVER.—In a certain number of cases a second attack of scarlet fever has occurred while convalescing from the first. This occurrence is probably not very rare, though it is not medically recognised to the extent which relapse in enteric fever is recognised. During 1895, three undoubted relapses of scarlet fever occurred out of 151 admissions. In two other cases in which secondary attacks occurred it was doubtful whether the first attack was true scarlet fever. In the three undoubted cases, the second attack began on the 38th, the 40th and the 17th day respectively from the commencement of the first attack. In one of these three undoubted relapse cases, the same patient had been in the Sanatorium two years previously for an attack of scarlet fever. Such cases, are however, very exceptional, and, as a rule, one attack confers immunity for the rest of life.

CASES OF INFECTION AMONG THE STAFF.—During 1895, two wardmaids have been infected with scarlet fever and diphtheria respectively. Both made a good recovery. No other cases of infectious disease among the staff have occurred.

NATURE OF CASES AND RESULTS OF TREATMENT.—Of the total 284 patients admitted during 1895, 151 were suffering from scarlet fever, 90 from diphtheria, 15 from measles, 11 from enteric fever, and 5 from small pox. Of the 5 under the heading "other diseases," 2 were sent in for scarlet fever and diphtheria respectively, 1 had erysipelas, and 2 patients admitted as small pox had syphilis and chicken pox respectively. Seven quarantine patients were admitted in connection with the 5 small pox patients who were admitted during the year from 4 houses. Of the quarantine patients 4 were kept at the Sanatorium for 9 days, 2 for 10 days, and 1 for 11 days, until in each case the revaccination proved successful, and it became certain that small pox was not incubating.

The results of treatment for several years are shown in the following table :—*

TABLE XXI.

DISEASE.*	Mortality per 100 cases of each Disease under treatment.						
	1889	1890	1891	1892	1893	1894	1895
Scarlet Fever	3·5 311	3·6 204	3·3 148	2·8 284	2·5 415	1·2 279	2·7 163
Enteric Fever	8·4 80	28·5 10	0 5	14·8 28	18·2 14	14·3 17	20·0 12
Diphtheria	33·3 5	60·0 5	8·8 12	14·3 44	3·3 33	17·6 56	7·6 96
Measles	3·5 85	0 9	0 16	0 1	0 4	0 1	0 15
Small Pox	0 1?	—	—	—	0 9	0 3	0 5

NOTE.—The small figures show the total number under treatment for each disease. It is important to have regard to them, as percentages based on small numbers are relatively less trustworthy.

The treatment of diphtheria has a special interest in view of the fact that the diphtheria antitoxin has been employed during the year in all serious cases of diphtheria. The rule adopted was only to use the antitoxin in cases in which the symptoms indicated that there was distinct danger to life. Other patients (including a large proportion of very mild cases that would get well whatever treatment was adopted) were treated by the ordinary remedies.

Twenty-three patients were treated with antitoxin, of whom 3 died, or 13·0 per cent. Seventy-one patients were treated without antitoxin, of whom 4 died, or 5·6 per cent. Of the antitoxin cases 4 required tracheotomy, and all these recovered, a succession of successful operation cases which has not been equalled in my experience in any year before antitoxin was used. In all these

* The case mortality (fatality) is calculated by dividing the deaths multiplied by 100, by half the sum of the admissions, discharges and deaths for the year.

patients tracheotomy was required a short time after admission, before the anti-toxin could produce any beneficial effect, except in improving immensely the prospects of recovery after the operation. The first patient, a child aged 3 years, was admitted on the third day of the disease and tracheotomy performed next morning. The second patient, a child aged 5 years, was admitted on the seventh day of the disease, and tracheotomy required within 8 hours of the first dose of antitoxin. The third patient, a child aged $2\frac{1}{2}$ years, was admitted on the second day of the disease and tracheotomy required almost immediately. The fourth patient, a child aged $4\frac{1}{2}$ years, was admitted on the ninth day of the disease, and tracheotomy immediately performed. Of the 4 patients treated with antitoxin who died, one in-patient, a child aged $3\frac{1}{2}$ years, was admitted on the third day of disease and died 6 days later ; one child, aged 6 years, was moribund on admission ; in a third case the antitoxin could not be given until the seventh day of the disease, death occurring 6 days later ; while the fourth case was of a malignant character, and the antitoxin treatment was only commenced on the fifteenth day of the disease.

The following table gives the number of patients for whom payment was claimed, the amount claimed in each case, and the amount already paid :—

TABLE XXII.

By whom Payable.	Number of Patients.	Amount Payable.	Amount already paid.
Brighton Board of Guardians... ..	5	£ s. d. 18 9 0	£ s. d. 18 9 0
War Office, for Patients from the Preston Barracks		120 2 6	120 2 6
Private Patients	16	97 5 2	94 19 8
Disinfection, and hire of van for Patients not removed to Sanatorium		7 11 10	7 11 10
		243 8 6	241 3 0

In 1894 the amount payable was £277 5s. 9½d., in 1893 it was £303 17s. 0½d., in 1892 it was £260 18s. 7d., and in 1891 it was £181 11s. 2½d. At the end of 1891 it was decided to abolish all payments for patients in the general wards, except for parochial patients, for whom the Board of Guardians pay 7s. 6d. per week for children under 10, and 15s. for others.

The items in the following statement have been furnished by Mr. Stevens, the Borough Accountant :—

TABLE XXIII.—*Expenditure at Sanatorium.*

	1889.		1890.		1891.		1892.		1893.		1894.		1895.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Salaries and Wages—														
Medical Officer	150	0 0	150	0 0	150	0 0	150	0 0	150	0 0	150	0 0	150	0 0
Matron and Steward	160	17 3	134	16 4	59	19 3	64	11 6	59	19 3	59	19 3	76	17 6
Nurses, Porters and Servants	601	3 7	339	12 6	326	18 9	422	12 10	435	9 2	421	6 8	416	14 7
Groceries, Provisions, &c.	1322	9 11	674	6 10	616	14 11	886	5 5	1092	17 6	821	10 4	713	6 10
Medical Sundries and Disinfectants	138	6 4	25	4 9	14	9 5	52	11 1	52	2 4	42	10 10	36	19 4
Drapery Goods (including Uniforms)	238	17 3	37	15 11	43	3 6	70	2 6	48	8 4	67	15 6	59	14 7
Gas, Coal, Coke, &c.	424	14 1	242	3 3	228	15 1	300	8 9	339	14 4	323	19 5	401	8 3
Rates and Taxes (including Water Rate)	35	5 0	35	6 4	35	5 0	37	5 0	37	5 0	38	10 0	41	1 8
Fire and Boiler Insurance	16	11 6	16	11 6	18	13 2	17	11 6	17	11 6	17	11 6	17	11 6
Printing, Stationery and Advertising	37	13 10	27	19 11	15	3 11	15	16 3	12	9 7	15	1 1	14	5 10
Hose, Hydrants and Fitting	—		—		41	0 0	—		—		—		—	
Repairs, &c.	115	15 6	138	4 1	100	6 1	140	17 0	70	10 0	59	1 11	16	14 0
Miscellaneous	113	3 1	44	8 8	51	0 4	85	11 2	126	2 4	127	9 3	94	14 10
Fees to Surgeons	2	2 0	2	2 0	8	8 0	6	6 0	2	2 0	—		15	2 9
Hire of Institution Nurses...	—		20	0 0	3	4 6	—		37	1 1	15	7 6	8	15 9
Gardener, Garden, Sundries and Manure	—		—		—		40	14 10	44	10 10	94	18 0	112	1 1
Total Expenditure in the Year	3356	19 4	1888	12 1	1713	1 11	2290	13 10	2526	3 3	2255	1 3	2175	8 6
No. of Patients in the Year	447		152		184		352		419		302		284	
Total No. of Weeks spent by above Patients in the Sanatorium	2439		1170		1095		2164		3031		2119		1517	
Total Cost per week for each Patient, including all the Working Expenses	s. d. 27 6		s. d. 34 6		s. d. 29 3		s. d. 21 2		s. d. 16 8		s. d. 21 3		s. d. 28 8	

No deduction is made in the preceding statement for amounts received each year for paying patients. It will be noted that the average weekly cost, including the proportional share of all current expenses of the year, was 28s. 8d. in 1895, as compared with 21s. 3d. in 1894, 16s. 8d. in 1893, 21s. 2d. in 1892 and 34s. 6d. in 1890.

Other things being equal, the larger the number of patients suffering from a given disease are under treatment, the less is the cost per head. The administrative reasons for this are fairly obvious ; but I may mention the fact that where single cases of an infectious disease are under treatment, it occasionally happens that the number of nurses is double that of patients, while the same staff would suffice for a dozen patients ; and the expenses of firing, &c., are identical in the two instances. During 1895 the number of patients requiring special isolation has been exceptionally large. On more than one occasion every one of the five divisions for patients has been in use, with a corresponding increase in expense for fuel, staff, &c. Furthermore, the above figures include the cost of disinfection for patients throughout the town.

The cost of maintenance per head per week during a series of years has been as follows :—

			s.	d.				s.	d.
1890	...	...	7	2	1893	...	...	5	2
1891	...	...	6	5	1894	...	...	5	2
1892	...	...	5	6	1895	...	...	5	7

This cost includes food and stimulants. It has not been found practicable to distinguish between staff and patients, so that the above figures give the average cost for these in common.

The following figures, extracted from returns furnished by the Clerk to the Metropolitan Asylums Board, will enable comparison to be made with the corresponding expenditure in Metropolitan Fever Hospitals.

During the year ending October, 1894, the total expenditure per patient per week averaged in seven fever hospitals of the Board 26s. 9 $\frac{2}{3}$ $\frac{1}{2}$ d., while the expenditure for maintenance was 5s. 6 $\frac{3}{4}$ d. During the year ending October, 1895, the corresponding figures were 28s. 2 $\frac{1}{3}$ $\frac{5}{2}$ d. and 5s. 6d., while taking average of the five years, 1890-95, there were 26s. 7 $\frac{1}{3}$ $\frac{8}{2}$ d. and 5s. 5 $\frac{3}{4}$ d.

The following is a statement of the disinfecting work carried out during 1895 :—

	190	Mattresses	
	167	Palliasses	
	136	Beds	
	512	Pillows and Bolsters	
	375	Blankets	
	179	Sheets and Counterpanes	
	9	Entire Contents of Rooms (not classified)	
	139	Dresses and Coats	
	780	Other Articles of Wearing Apparel	
	165	Carpets	
	720	Other Articles	
	65	Boxes, &c., of Wearing Apparel (Articles not classified), and a large number of minor articles.	
Number of Journeys with Ambulance to Sanatorium	...	278	
„ „ „ Hospitals	...	45	
„ „ Van to Sanatorium with Infected Articles	... ..	230	
„ „ Van from Sanatorium to return Disinfected Articles	...	214	
		<hr/>	
		767	
		<hr/>	

